

non-real time telecommunication connections over a radio interface between mobile stations and the fixed parts of the mobile telecommunication system, comprising in the order recited the steps of:

- suspending at least one active non-real time telecommunication connection between a mobile station and the fixed parts of the mobile telecommunication system,

- performing a handover from the first network connection to the second network connection, and

- resuming the suspended non-real time telecommunication connection.

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REMARKS

A marked-up version of the rewritten claim is attached hereto.

The present invention involves three distinct phases performed in order, as is also recited in the independent claim:

- suspending an active connection

- only after having suspended the connection, performing a handover,

and only having successfully completed the handover, resuming the previously suspended active connection.

Here "suspending" means that active transmission of data is interrupted in a controlled manner, so that both the transmitting and the receiving devices in said connection are aware of which data packets were transmitted successfully. The

enclosed Webster's Dictionary confirms this by explaining the word "suspend" as "2. To cause to cease or become inoperative for a time; to stop or withhold temporarily". It is clear that suspending involves a certain degree of voluntariness; the active connection does not cease to exist because of some abrupt transmission failure, but is wound down in a controlled manner. Conceptually one may think that the transmitting and receiving devices jointly establish a state where each of them knows exactly what has happened so far in the active connection, and each of them understands that nothing more will happen before the resuming step. Note that all this is accomplished *before* the handover procedures are initiated.

It is easy to understand that such an order of actions enables completely avoiding any loss of data. This is an important difference from prior art methods where rerouting only started once it was noted that the old connection had problems. If the transmitting and receiving devices wait until some packets have already gone missing due to transmission failures before they start performing a handover, it is too late to recover all lost data. The most one can do is to take some steps towards minimizing the damage, i.e., making sure that the amount of lost data stays as small as possible.

Kalmanek confirms the above-explained suboptimal prior art handover (or handoff, or hand-off) concept and agrees with it at many locations of his description. For example in column 2, lines 36-38, Kalmanek acknowledges that there will be both "transmission errors and loss of data due to mobile host roaming" and announces that his invention will "reduce" [but not avoid] data loss during hand-off".

In column 4, lines 18-25, Kalmanek explains how the starting point for his rerouting procedure is a situation where the mobile host has moved outside the area covered by its previous local network, which consequently can no longer provide connectivity. At that point it is definitely too late to start suspending any active connections through the old local network because the mobile host can no longer receive its transmissions; neither can the old local network hear anything from the mobile host. The most the devices can do is to note that the other side is not listening any more, and start rerouting as quickly as possible in order not to transmit any more data that the old recipient could not receive anyway.

Claim 1 recites "...suspending...". This is totally missing from Kalmanek. Further, amended claim 1 now recites "...in the order recited..." i.e., the suspension occurs before the handover. This is also missing from Kalmanek. Thus the rejection of claims 1 and 9 under 35 U.S.C. 102 on this reference should be withdrawn.

Further, since there is no suggestion in Kalmanek of the present invention, it is unobvious over this reference.

The first method step recited in the Nishio is "sending hand-over start information to..." which means that also Nishio fails to disclose a method where a connection would be suspended first and handover would be started only thereafter. The other cited references also fail to show the order of actions as recited in the applicant's pending independent claims.

Therefore, the rejection of claims 2-8 under 35 U.S.C. 103 on Kalmanek in view of the various remaining references should be withdrawn.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

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April 26, 2002
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Application No.: 297-008939-US (PAR)

MARKED UP CLAIM

1. (Amended) A method for a mobile station for performing a handover from a first network connection to a second network connection in a mobile telecommunication system providing for non-real time telecommunication connections over a radio interface between mobile stations and the fixed parts of the mobile telecommunication system, comprising in the order recited the steps of:

- suspending at least one active non-real time telecommunication connection between a mobile station and the fixed parts of the mobile telecommunication system,
- performing a handover from the first network connection to the second network connection, and
- resuming the suspended non-real time telecommunication connection.

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